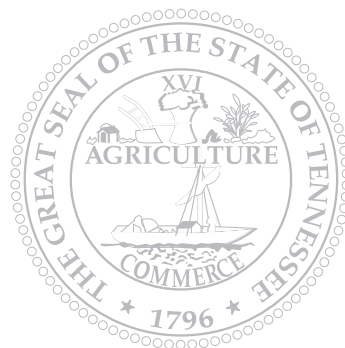


*Tennessee Comprehensive Assessment Program*

# Item Sampler

**Grade 6**



# Table of Contents

<b>Introduction</b> .....	3
What is the TCAP Achievement Test? .....	3
What are the questions testing? .....	3
Who will be tested? .....	3
How long will the tests take? .....	3
How do I use the sample questions? .....	3
How will the tests be scored? .....	4
May calculators be used? .....	4
Which test accommodations may be used? .....	4
What are some tips for preparing students for the test? .....	4
<b>Reading and Language Arts</b> .....	5
<b>Mathematics</b> .....	12
<b>Science</b> .....	19
<b>Social Studies</b> .....	26
<b>Answer Key</b> .....	33

# Introduction

## **What is the TCAP Achievement Test?**

The TCAP Achievement Test is a multiple-choice test designed to measure student achievement in certain skills in five subject areas: Reading, Language Arts, Mathematics, Science, and Social Studies. The sample questions in this On-Line Item Sampler are representative of the item types and item formats that will be used in the actual test, including those questions with art and without art.

## **What are the questions testing?**

Questions are written to test student performance in State and national content areas. The State Content Standards and Performance Indicators were developed by the Tennessee Department of Education. These Standards and Performance Indicators are listed on the State Department of Education Web site at <http://www.state.tn.us/education/ci/cistandards.htm>.

## **Who will be tested?**

All students in grades 3 through 8 will be tested.

## **How long will the tests take?**

The length of the tests will vary, depending on the grade level. The time limits are generous and allow most students time to finish. Extended time limits apply for students using accommodations.

## **How do I use the sample questions?**

These questions provide information for students, parents, and teachers about the TCAP Achievement Test. The questions in the On-Line Item Sampler are representative of most of the question types that will be on the TCAP Achievement Test.

These questions can be used as a classroom learning session or as an individual, short practice test to prepare students for the actual test. Item types with and without art are presented to better familiarize students with the actual test format.

An answer key for the sample questions is provided at the end of this On-Line Item Sampler.

### **How will the tests be scored?**

The test answers will be machine scored. Results from the test provide information about how well students performed on the content being tested.

### **May calculators be used?**

Calculators may be used on TCAP Achievement Grades 3–8 Mathematics subtests, Part 1 and Part 2. Calculators **may not** be used on any part of the K–2 test.

### **Which test accommodations may be used?**

The Achievement Test may be administered using various procedures (or accommodations) that are used during the student’s daily educational program. Certain conditions must be met for students to be eligible for Special and English Language Learner Accommodations.

### **What are some tips for preparing students for the test?**

Remind students to:

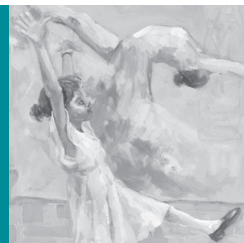
**Relax:** It is normal to be somewhat anxious before the test. Remember that the score is only one of a number of measures of performance.

**Listen:** Listen to and read the test directions carefully.

**Plan Use of Time:** First, answer all the questions you are sure about. Do not spend too much time on any one question. If a question seems to take too long, skip it and return to it later if you have extra time.

**Pause and Think:** If you are not sure how to answer a question, carefully read it again. Rule out answer choices that you know are incorrect and then choose from those that remain.

# Reading and Language Arts



**Directions** Read the following passage. Then answer Numbers 1 through 11.

## Earthworms: Friends of the Earth

Earthworms are slimy and squiggly. You can't pet them or teach them tricks. However, good gardeners love them. Nothing makes gardeners happier than finding a few dozen of the creatures in their topsoil. Why are earthworms so popular with gardeners?

Earthworms do an amazing job of working the soil. They don't loosen the ground like a human gardener; they eat their way down into the dirt. The slime that covers them helps them to move even through rough and stony soil. As they tunnel, they swallow leaves and other plant material along with the dirt. Fortunately, earthworms don't destroy growing plants. They just eat dead plant material that is falling apart in the soil. After they digest the soil and plant litter, they leave it behind in air pockets or old tunnels.

The material that earthworms leave behind is called *castings*. Castings contain elements that are good for plants. They add nitrogen and calcium to the soil. In one day, an earthworm can produce castings that weigh as much as it does.

Earthworms are like little machines for making a kind of fertilizer called compost. Earthworms not only make the compost, they spread it all through the top 12 inches of topsoil. Many gardeners think earthworm castings work much better than chemicals that can be bought and added to the soil.

The tunnels that earthworms make by burrowing are good for plants. They contain air that is essential for plant growth. Sometimes water fills the burrows and remains there until the soil can absorb it. Many small organisms that are helpful to plants use the tunnels too. The tunnels provide a way for the organisms to go deeper into the soil. Over time, earthworms make rough soil finer. This finer soil makes it easier for plants to push up through the earth as they grow.

Earthworms even help the soil after they die. Earthworms' bodies gradually become part of the compost.

It's not just today's gardeners that have been helped by earthworms. Earthworms have been doing their work for millions of years in nearly all the soils in the world. They have made a great contribution to human agriculture by improving the soil. One scientist who studied earthworms for 40 years said that few animals have played such an important part in the history of the world.

**Reporting Category:** 1 Content

**Performance Indicator:** 6.1.spi.26 Determine the author's purpose for writing a selection (i.e., to inform, to persuade, to entertain, to share emotions).

**1** The author most likely wrote this passage to

- A** persuade readers to start gardening
- B** teach readers how to make a compost heap
- C** entertain readers with a story about an earthworm
- D** inform readers about how important earthworms are for the soil

**Reporting Category:** 2 Meaning

**Performance Indicator:** 6.1.spi.7 Select questions to clarify thinking.

**2** Which question does the passage answer?

- F** Where is fertilizer sold?
- G** How many kinds of worms are there?
- H** Why do gardeners like earthworms?
- J** What kind of gardens do earthworms like?

**Reporting Category:** 2 Meaning

**Performance Indicator:** 6.1.spi.9 Evaluate text for fact and opinion.

**3** Which sentence from the passage states an opinion?

- A** Nothing makes gardeners happier than finding a few dozen of the creatures in their topsoil.
- B** As they tunnel, they swallow leaves and other plant material along with the dirt.
- C** In one day, an earthworm can produce castings that weigh as much as it does.
- D** Over time, earthworms make rough soil finer.

**Reporting Category:** 3 Vocabulary

**Performance Indicator:** 6.1.spi.1 Use knowledge of root words, affixes, syllabication, and/or spelling patterns as aids in determining meaning within context.

**4** Which word from the passage uses a suffix?

- F** agriculture
- G** nitrogen
- H** sometimes
- J** squiggly

**Reporting Category:** 3 Vocabulary

**Performance Indicator:** 6.1.spi.5 Select appropriate synonyms, antonyms, and homonyms within context.

**5** Which two words from the passage are synonyms?

- A** rough, fine
- B** slimy, stony
- C** burrow, tunnel
- D** improve, destroy

**Reporting Category:** 4 Writing/Organization

**Performance Indicator:** 6.2.spi.12 Supply a missing piece of information in an outline.

**6** Look at the outline below.

I. Earthworms

A. Help for gardeners

1. \_\_\_\_\_
2. Leave behind chemicals good for plants

B. Help for plants

1. Make soil finer
2. Tunnels have air to help plants grow

**What piece of information is missing from the outline?**

- F** Prune the plants
- G** Eat the flowers
- H** Compact the earth
- J** Spread the compost



**Reporting Category:** 4 Writing/Organization

**Performance Indicator:** 6.2.spi.13 Select an appropriate thesis statement for a writing sample.

**7** Which sentence is the thesis statement for the passage?

- A** Earthworms are slimy and squiggly.
- B** Earthworms do an amazing job of working the soil.
- C** Castings contain elements that are good for plants.
- D** Many small organisms that are helpful to plants use the tunnels too.

**Reporting Category:** 5 Writing Process

**Performance Indicator:** 6.2.spi.9 Select the best way to combine sentences to provide syntactic variety within context.

**8** Read the sentences below.

*The material that earthworms leave behind is called castings. Castings contain elements that are good for plants.*

**Which is the best way to combine these sentences?**

- F** Castings are what earthworms leave behind: and are good for plants.
- G** Castings have elements good for plants and they are left behind by earthworms.
- H** The material that earthworms leave behind are castings contain elements that are good for plants.
- J** The material that earthworms leave behind is called *castings*, which contain elements that are good for plants.

**Reporting Category:** 6 Grammar Conventions

**Performance Indicator:** 6.3.spi.1 Recognize usage errors occurring within context (e.g., double negatives, troublesome words: to, too, two; their, there, they're; lie, lay; sit, set).

**9** Choose the sentence that is written correctly.

- A** They're garden was flooded by the heavy rain.
- B** That garden is where there growing vegetables.
- C** Earthworms wriggle their bodies through the dirt.
- D** The gardeners bought new plants at they're local nursery.

**Reporting Category:** 7 Techniques and Skills

**Performance Indicator:** 6.1.spi.8 Use common text features to make meaning from text (i.e., newspapers and textbooks).

**10** Andrea is looking for the definition of *compost* in her science book.

In which section is she most likely to find the definition?

- F** Acknowledgments
- G** Glossary
- H** Index
- J** Table of Contents

**Reporting Category:** 7 Techniques and Skills

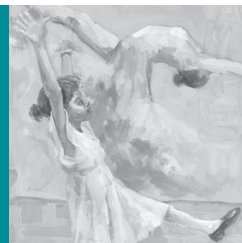
**Performance Indicator:** 6.2.spi.14 Rank possible research resources according to reliability.

**11** Cindy wants to find more information about how earthworms are helpful to gardeners.

Which resource would be the most reliable for her research?

- A** a scientific journal featuring an article on earthworms
- B** a poem about worms in a children's magazine
- C** a tabloid story about the discovery of a 20-foot-long earthworm
- D** the novel *How to Eat Fried Worms*

# Mathematics



**Reporting Category:** 1 Number and Operations

**Performance Indicator:** 6.1.spi.5 Compare and order whole numbers, fractions, decimals, and percents using the appropriate symbol ( $<$ ,  $>$ ,  $=$ ).

**1** Look at the inequality below.

$$\frac{2}{3} < \frac{3}{4}$$

Which fraction could correctly replace  $\frac{2}{3}$  in the inequality?

**A**  $\frac{4}{5}$

**B**  $\frac{5}{6}$

**C**  $\frac{5}{7}$

**D**  $\frac{7}{8}$

**Reporting Category:** 1 Number and Operations

**Performance Indicator:** 6.1.spi.8 Use estimation to select a reasonable solution to a computation involving whole numbers, fractions, and/or decimals.

**2** Ms. Johnson went to the store and bought 2 gallons of milk for \$2.85 each and 1 loaf of bread for \$1.98. About how much did Ms. Johnson spend?

**F** \$5.00

**G** \$6.00

**H** \$8.00

**J** \$10.00

**Reporting Category:** 2 Algebraic Thinking

**Performance Indicator:** 6.2.spi.1 Extend geometric and numerical patterns.

**3** Look at the number pattern below.

0, 2, 6, 12, . . .

Which three numbers are next in the pattern?

- A** 18, 24, 30
- B** 20, 30, 42
- C** 24, 48, 96
- D** 36, 108, 324

**Reporting Category:** 2 Algebraic Thinking

**Performance Indicator:** 6.2.spi.2 Generalize patterns in data represented in tables.

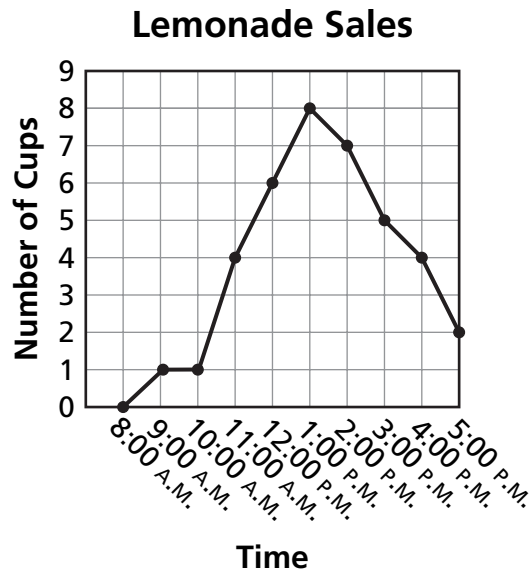
**4** Look at the table below.

$x$	$y$
3	7
2	5
0	1

Which equation represents the data in the table?

- F**  $y = x - 4$
- G**  $y = x - 1$
- H**  $y = 2x - 1$
- J**  $y = 2x + 1$

- 5 On Saturday, Alicia's lemonade stand was open from 8:00 A.M. to 5:00 P.M. Alicia made the graph below to help her determine the best hours for selling lemonade.



On Sunday, Alicia will open her stand for only two hours. Based on information in the graph, within which two-hour period should Alicia open her lemonade stand in order to sell the most lemonade?

- A 11:00 A.M. to 1:00 P.M.
- B 12:00 P.M. to 2:00 P.M.
- C 1:00 P.M. to 3:00 P.M.
- D 2:00 P.M. to 4:00 P.M.

**Reporting Category:** 3 Real World Problem Solving

**Performance Indicator:** 6.1.spi.2 Solve one-step real-world problems involving whole numbers and decimals.

**6** Derek bought a sandwich for \$5.75, a drink for \$0.78, and a large bag of chips for \$3.85. How much money did Derek spend all together?

**F** \$8.60

**G** \$9.60

**H** \$10.38

**J** \$11.38

**Reporting Category:** 4 Data Analysis and Probability

**Performance Indicator:** 6.5.spi.3 Determine the mean of a data set.

**7** Tina earned scores of 84 in science, 95 in French, 86 in social studies, 94 in language arts, and 91 in math. What is Tina's overall average (mean) grade?

**A** 89

**B** 90

**C** 91

**D** 92

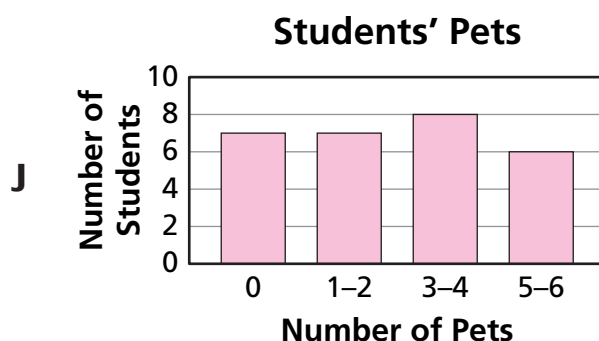
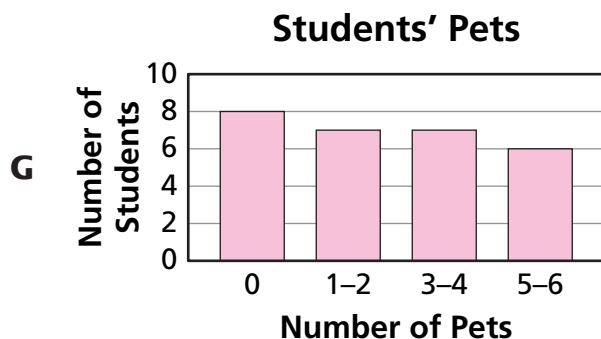
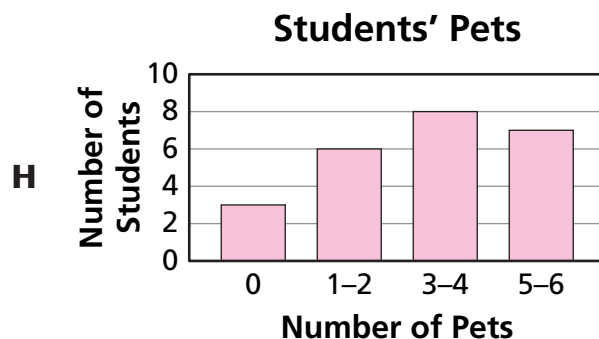
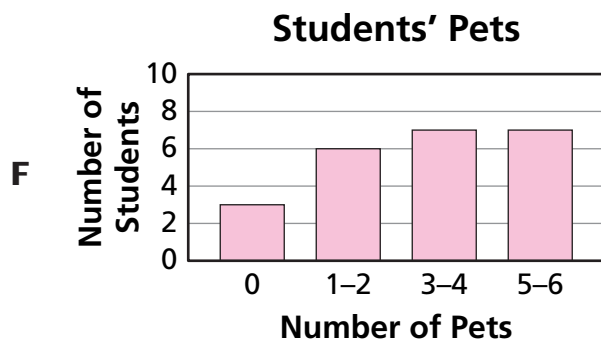
Performance Indicator: 6.5.spi.7 Connect data sets and their graphical representations (i.e., bar graphs, circle graphs, and stem-and-leaf plots).

- 8 The students in Ms. Bentley's class listed the number of pets they own. The results are shown in the tally chart below.

Students' Pets

Number of Pets	Number of Students
0	
1-2	
3-4	
5-6	

Which graph correctly represents the data in the tally chart?





**Reporting Category:** 5 Measurement

**Performance Indicator:** 6.4.spi.4 Select units of appropriate size and type to measure angles, perimeter, area, capacity, volume, and weight.

**9** Which unit of measurement is best to measure the length of an eyelash?

- A** millimeter
- B** decimeter
- C** meter
- D** kilometer

**Reporting Category:** 5 Measurement

**Performance Indicator:** 6.4.spi.9 Solve problems involving ratios and proportions.

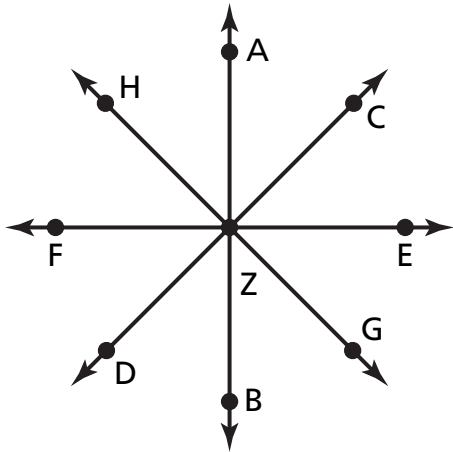
**10** Diane reads 3 books every 15 days. How many days will it take her to read 12 books?

- F** 36
- G** 45
- H** 48
- J** 60

Reporting Category: 6 Geometry

Performance Indicator: 6.3.spi.6 Classify angles as acute, obtuse, right, or straight.

**11** Look at the diagram below.



Which angle in the diagram is a right angle?

- A  $\angle AZB$
- B  $\angle CZE$
- C  $\angle HZD$
- D  $\angle CZF$

Reporting Category: 6 Geometry

Performance Indicator: 6.3.spi.7 Classify quadrilaterals using their defining properties.

**12** Jeff describes a geometric figure. He says the figure has 4 sides, but only 2 of the sides are parallel. The figure has 2 acute angles and 2 obtuse angles. What geometric figure does Jeff describe?

- F square
- G rectangle
- H trapezoid
- J parallelogram

# Science



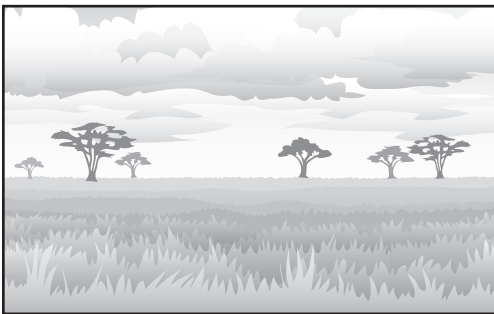
**Reporting Category:** 1 Living Things and Their Environments

**Performance Indicator:** 6.2.spi.3 Predict whether an organism can survive in a particular ecosystem.

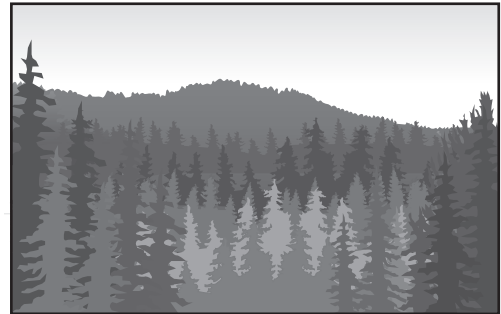
**1** Epiphytes are plants that get their water directly from the air.

Which ecosystem would have the greatest number of epiphytes?

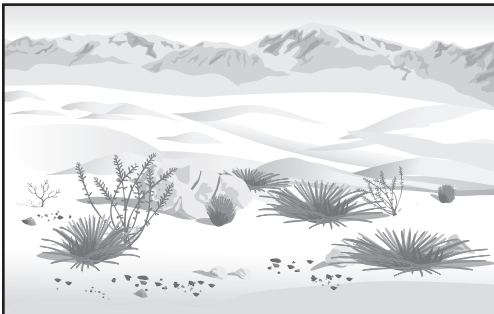
**A**



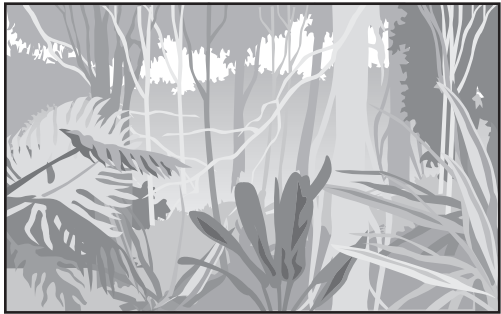
**C**



**B**



**D**



**Reporting Category:** 1 Living Things and Their Environments

**Performance Indicator:** 6.2.spi.1 Recognize how animals and plants are interdependent.

**2** Which organism produces oxygen for other organisms?

- F** a fish
- G** a water lily
- H** a blue bird
- J** a snail

**Reporting Category:** 2 Food Production and Energy for Life

**Performance Indicator:** 6.3.spi.1 Identify how organisms obtain food for energy.

**3** A maple tree gets food energy by

- A** producing sugar
- B** filtering water
- C** consuming other organisms
- D** capturing oxygen from the air

**Reporting Category:****2 Food Production and Energy for Life****Performance Indicator:****6.3.spi.2 Classify organisms as producers, consumers, or decomposers in a food chain or food web.****4** Look at this food chain.

Dandelion → Ladybug → Robin

Which of these would not be a role of the ladybug?

- F** herbivore
- G** consumer
- H** producer
- J** prey

**Reporting Category:****3 Diversity and Adaptation****Performance Indicator:****6.5.spi.1 Identify adaptations that enhance the survival of organisms in an environment.****5** A certain environment is warm and wet all year long. Which characteristic would be best for an animal adapted to this environment?

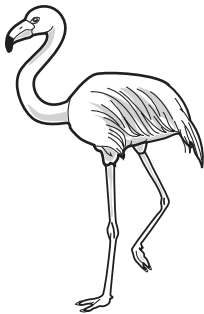
- A** thin skin
- B** thick fur
- C** long tail
- D** layer of blubber

**6** Look at this picture.



Which animal is best adapted to survive in this environment?

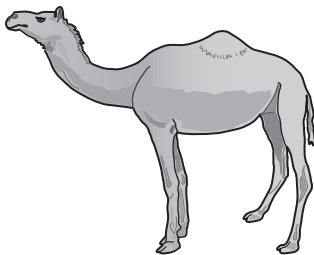
**F**



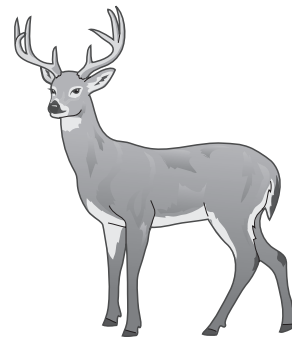
**H**



**G**



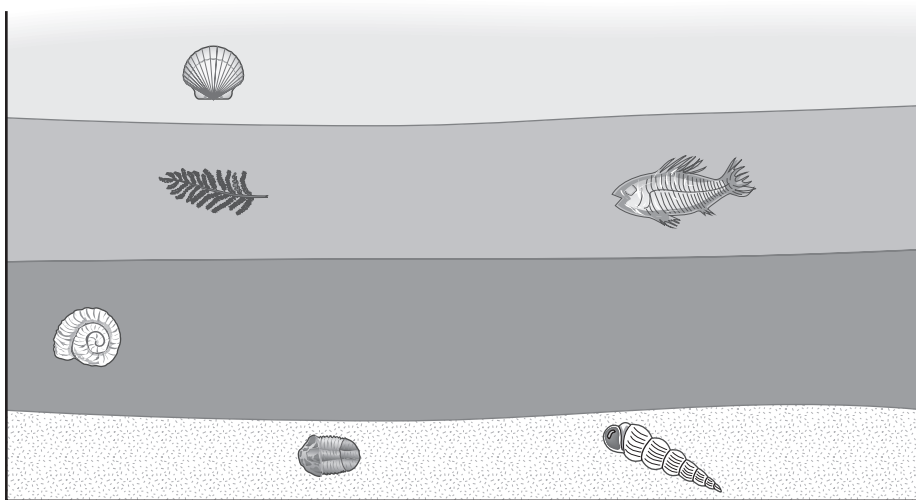
**J**



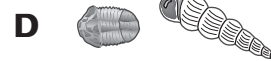
**Reporting Category:** 4 Biological Change

**Performance Indicator:** 6.6.spi.3 Differentiate between the relative age of fossils in sedimentary rock.

**7** Look at the diagram of rock layers.



Which two organisms lived at about the same time?



**Reporting Category:** 4 Biological Change

**Performance Indicator:** 6.6.spi.2 Identify factors that contribute to extinction.

**8** Morefield's leather flower is an endangered plant in northern Tennessee. This flower grows in areas where people want to live. Which threat would most likely endanger this plant?

**F** urbanization

**H** forest fires

**G** erosion

**J** drought

**Reporting Category:**

**5 Earth and Its Place in the Universe**

**Performance Indicator:**

**6.7.spi.1 Distinguish between a day, month, and year on Earth based on the movements of the Earth, sun, and moon.**

**9** How long does it take Earth to revolve once around the sun?

- A** a day
- B** a week
- C** a month
- D** a year

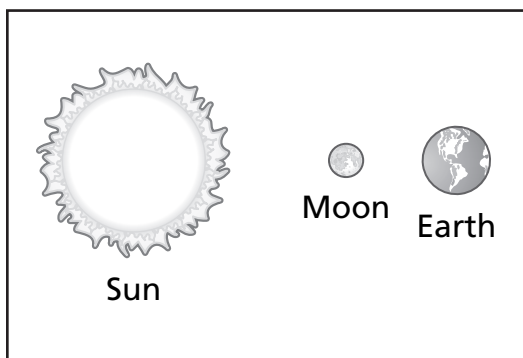
**Reporting Category:**

**5 Earth and Its Place in the Universe**

**Performance Indicator:**

**6.7.spi.5 Differentiate between a solar and a lunar eclipse.**

**10** Look at this diagram.



**Which event does the diagram show?**

- F** a full moon
- G** a crescent moon
- H** a lunar eclipse
- J** a solar eclipse



**Reporting Category:** 6 Energy

**Performance Indicator:** 6.14.spi.1 Predict the direction of heat flow between objects.

**11** A boy uses a spatula to remove freshly baked cookies from a cookie sheet.

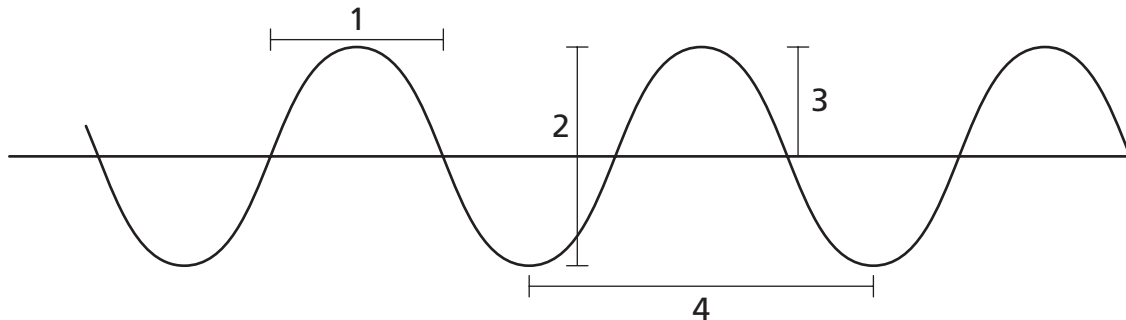
Which statement best describes the direction that heat will travel between the spatula and the cookies?

- A** Heat will flow from the spatula into the cookies.
- B** Heat will flow from the cookies into the spatula.
- C** Heat will flow into both the cookies and the spatula.
- D** Heat will flow out of both the cookies and the spatula.

**Reporting Category:** 6 Energy

**Performance Indicator:** 6.14.spi.2 Identify the wavelength, frequency, and amplitude of a wave.

**12** Look at this wave pattern.



Which measurement line represents the amplitude of the wave?

- F** 1
- G** 2
- H** 3
- J** 4

# Social Studies

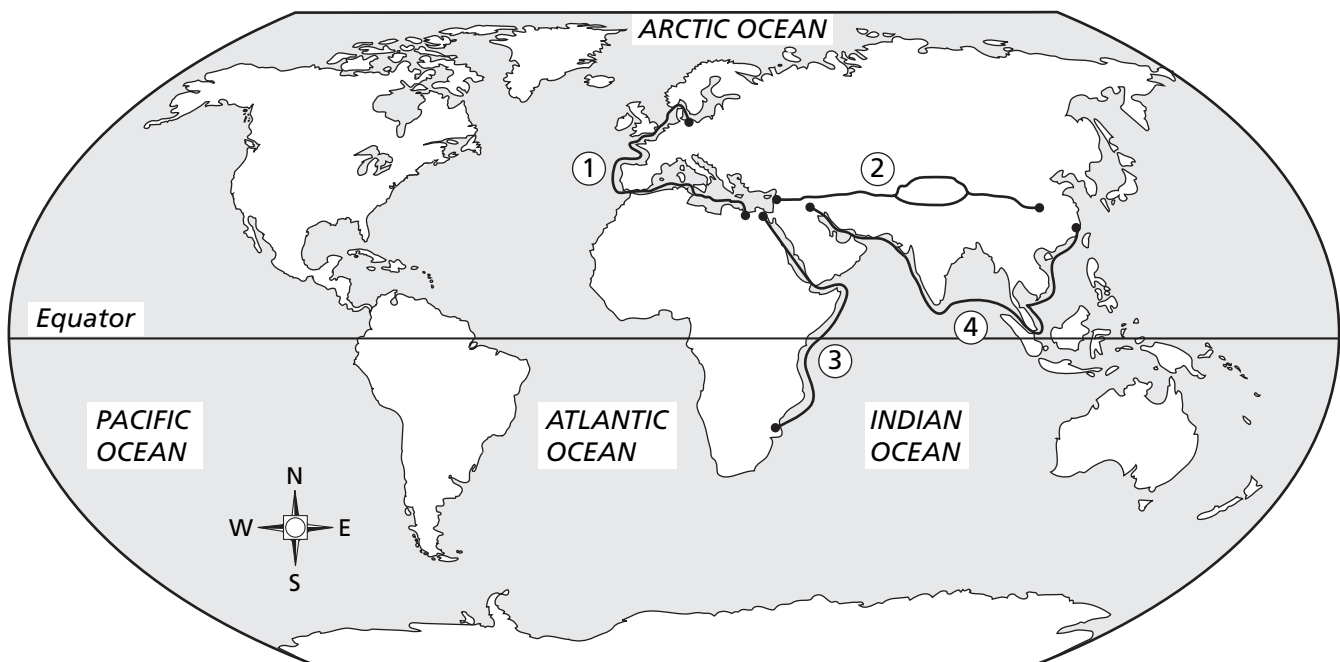


**Reporting Category:** 1 Economics

**Performance Indicator:** 6.2.spi.2 Identify major trade routes (i.e., silk roads, Persian trade routes, African trade routes, Mediterranean trade routes, ocean routes).

**Directions** Use the map below and your own knowledge to do Number 1.

## Some Trade Routes from A.D. 600–1500



**1** Which number on the map shows the route that Marco Polo followed on his journey to China?

- A** 1
- B** 2
- C** 3
- D** 4

**Reporting Category:** 1 Economics

**Performance Indicator:** 6.2.spi.6 Analyze how basic economic ideas influenced world events (i.e., supply and demand leads to exploration and colonization).

**2** Many European nations wanted to find a faster route to Asia in the 1400s and 1500s in order to

- F** spread democratic ideas
- G** learn more about different cultures
- H** provide military support for wars
- J** meet the demand for spices and other goods

**Reporting Category:** 2 Governance and Civics

**Performance Indicator:** 6.4.spi.3 Identify the development of written laws (i.e., Hammurabi's Code, Justinian Code, Magna Carta).

**3** Which of these is based on the idea “an eye for an eye, a tooth for a tooth”?

- A** Roman law
- B** Magna Carta
- C** Justinian Code
- D** Hammurabi's Code

4

Strong government  
Organized religion  
Writing system

A community that has all of the characteristics listed above would most likely be at which step of development?

- F** city-state
- G** farming
- H** nomadic
- J** village

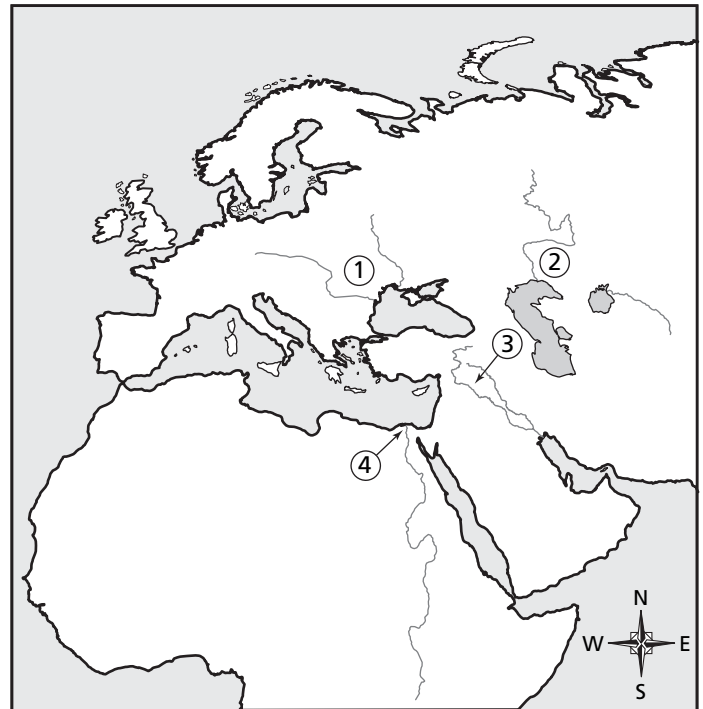
**Reporting Category:** 3 Geography

**Performance Indicator:** 6.3.spi.3 Identify the location of early civilizations on a map (i.e., Mesopotamian, Egyptian, Ancient Chinese, Indian).

**5** Which number on the map shows the location of Mesopotamia?

- A** 1
- B** 2
- C** 3
- D** 4

**Some Early Civilizations**



**Reporting Category:** 3 Geography

**Performance Indicator:** 6.1.spi.1 Recognize the basic components of culture (i.e., language, common values, traditions, government, art, literature, lifestyles).

**6** Which topic would be best to include in a report about ancient Chinese culture during the Shang dynasty?

- F** Climate
- G** Geography
- H** Language
- J** Population

**Directions** Use the passage below and your own knowledge to do Number 7.

### The Pomegranate Seeds

One day Hades, god of the underworld, stole Persephone to be his wife. Her mother Demeter spent all her time searching for her daughter. She was so upset that the plants lost their leaves and stopped growing. Many people and animals died because there was no food.

Zeus sent for Demeter and told her that Persephone would be allowed to return to Earth if she hadn't eaten any food while she was in the underworld. Unfortunately, Persephone had eaten some pomegranate seeds. So Zeus made a deal with Hades. Persephone could stay with her mother for nine months of the year, and the other three she would live with Hades.

Now, every year during the three months when Persephone is with Hades, the trees lose their leaves, and plants do not grow.

**7** The myth of “The Pomegranate Seeds” was created by the ancient Greeks in order to explain

- A** why the seasons change
- B** how to lead a good life
- C** what happens after death
- D** how Earth was created

**Reporting Category:****4 Prehistory–Ancient Civilizations****Performance Indicator:**

**6.5.spi.5 Identify major technological advances (i.e., tools, wheel, irrigation, river dikes, development of farming, advances in weaponry, written language, and printing press).**

**8**

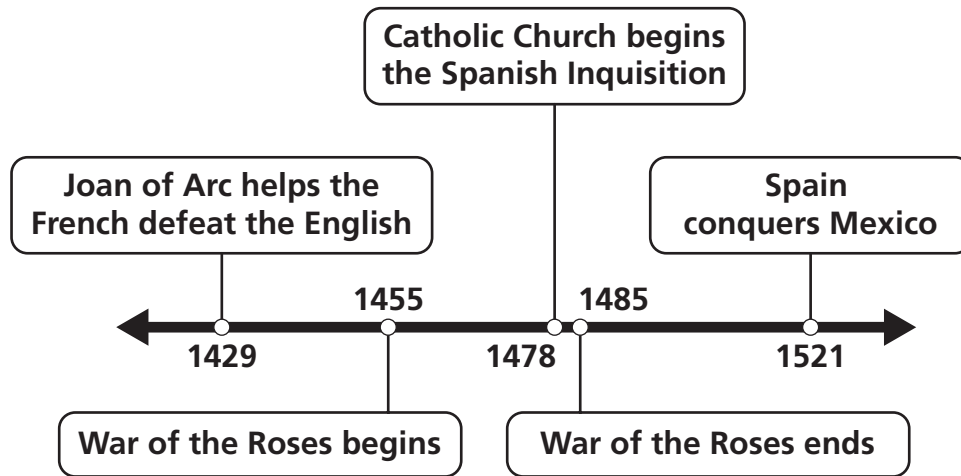
**Which major agricultural advancement developed in ancient Egypt as a result of dependence on the Nile River?**

- F** paper
- G** the plow
- H** irrigation
- J** the wheel

**Reporting Category:** 5 Dark Ages–Renaissance

**Performance Indicator:** 6.5.spi.9 Recognize and order major historical events on a timeline between the Middle Ages and Renaissance.

**Directions** Use the timeline below and your own knowledge to do Number 9.



Note: Dates are approximate.

**9** According to the timeline, which event occurred first?

- A** Spain conquered Mexico.
- B** The War of the Roses began.
- C** The Spanish Inquisition began.
- D** Joan of Arc helped France defeat the English.

**Reporting Category:** 5 Dark Ages–Renaissance

**Performance Indicator:** 6.1.spi.2 Identify the job characteristics of archaeologists, anthropologists, geologists, and historians.

**10** An archaeologist would most likely study

- F** past events that shaped a nation
- G** physical characteristics of early humans
- H** pottery, tools, and remains of past cultures
- J** origin, history, and physical components of Earth



## Answer Key

### Reading and Language Arts

1	D
2	H
3	A
4	J
5	C
6	J
7	B
8	J
9	C
10	G
11	A

### Mathematics

1	C
2	H
3	B
4	J
5	B
6	H
7	B
8	H
9	A
10	J
11	C
12	H

### Science

1	D
2	G
3	A
4	H
5	A
6	F
7	D
8	F
9	D
10	J
11	B
12	H

### Social Studies

1	B
2	J
3	D
4	F
5	C
6	H
7	A
8	H
9	D
10	H